D. UTILITIES

This section presents an overview of the utility systems in the City of Alameda and in the North Park Street Code plan area, including water distribution, sanitary wastewater, industrial wastewater, solid waste management, electricity and natural gas, and telecommunications. The potential effect of buildout of the North Park Street Code on these facilities is assessed, the need for new or replacement facilities to serve the development that may occur is documented, and specific measures required to mitigate any adverse impacts are presented.

1. SETTING

a. Potable and Reclaimed Water

The water service provider for the City of Alameda is the East Bay Municipal Utility District (EBMUD). The primary source of water for the North Park Street Code area is the Pardee Reservoir on the Mokelumne River in the Sierra Nevada Mountains. Raw water is treated at EBMUD's Orinda filter plant and conveyed to Alameda via pipeline. EBMUD operates and maintains the water distribution system under a Joint Powers Agreement.

Two distinct water distribution systems serve the North Park Street Code area: one provides potable water and water for fire fighting; the other serves fire protection sprinkler systems within area buildings. EBMUD supplies the water distribution systems through metered points of connection. The distribution systems are comprised primarily of cast iron and transite (asbestos cement) pipeline with some steel pipeline. The systems are over 50 years old.

Water supply The East Bay Municipal Utility District (EBMUD) supplies water and provides wastewater treatment to the City of Alameda. The District supplies water to approximately 1.3 million customers within a 331-square-mile service area and provides wastewater treatment to approximately 650,000 residents within an 88-square-mile area.

The primary source of water for Alameda is the 577-mile protected watershed of the Mokelumne River on the west slope of the Sierra Nevada Mountains. This reservoir collects water from snowmelt from Alpine, Amador, and Calaveras counties. The EBMUD has water rights for up to 325 million gallons daily from the Mokelumne River. In years of normal rainfall, the District's reservoirs receive an additional 30,000 acre-feet of water from local watershed runoff. In dry years, evaporation and other reservoir losses may exceed local runoff. The water is conveyed to the Orinda filter plant where it is treated and stored. EBMUD's distribution system includes 4,100 miles of pipes, 137 pumping plants, and 164 neighborhood reservoirs with an operating capacity of 830 million gallons. Water is transferred to Alameda via a pipeline beneath the Oakland Inner Harbor. The water distribution systems are operated and maintained by EBMUD through an agreement with the City. A complete network of water mains and connectors covers Alameda. According to EBMUD, there are 18,098 water accounts in Alameda. This figure is broken down into 14,608 single-family residential accounts, 2,124 multi-family residential accounts, 61 industrial accounts, and 1,305 commercial accounts.

Water recycling or reclamation, is a key element of EBMUD's future water supply management planning. Typical uses for recycling water include irrigation, toilet flushing, cooling towers, and process water. Larger commercial and industrial projects are encouraged to plan and install separate piping systems to permit use of reclaimed water for irrigation or manufacturing processes. Currently, there are four operating recycled water projects serving EBMUD's irrigation and commercial customers. EBMUD customers currently have projected water-recycling use of 8.4 mgd for 2011 while EBMUD's long-term program goal is to achieve about 20 mgd of recyled water use by 2040.

EBMUD will request installation of these dual distribution facilities in the western portions of the North Park Street Code area. The North Park Street Code area is at the eastern edge of the East Bayshore Recycled Water Project. As a condition of approval, new development within the Recycled Water Project area will be required to install separate piping systems for future use of recycled water.

b. Wastewater

Collection and Transport. The original collection system in the City of Alameda was a true "storm/sewer" system, where both storm water flows and sanitary sewer flows were collected and combined into one collection system and then discharged directly into San Francisco Bay. Work began in the City of Alameda in the mid 1940s to separate the storm water flows from the sanitary sewer flows and to establish two independent systems.

The portions of the sanitary sewer distribution system that are within the public streets is operated and maintained by the City of Alameda, except for an interceptor trunkline that is maintained by EBMUD. Property owner own the connections to the public system from private property. An EBMUD sanitary sewer interceptor, which ranges in size from 48 inches to 60 inches in diameter, runs through the plan area along Clement Avenue, heads south on Grand, then west on Buena Vista, and north on Constitution Way where it joins with other interceptors and community collection systems at the intersection of Constitution Way and Atlantic Avenue.

The sanitary sewer collection system was constructed more than 50 years ago. The City began making improvements, upgrades, and modifications to the existing public collection system throughout the City in response to a 1986 report that detailed the system's deficiencies. As of November 2002, 90% of these improvements had been completed.

Treatment. Alameda is served by EBMUD's Special District No. 1 (SD-1), which treats domestic, commercial, and industrial wastewater for the cities of Alameda, Albany, Berkeley, Emeryville, Oakland, and Piedmont, and for the Stege Sanitary District, which includes El Cerrito, Kensington, and part of Richmond. The Main EBMUD wastewater treatment plant (WWTP), located at the foot of the San Francisco-Oakland Bay Bridge, treats wastewater from SD-1. EBMUD prohibits discharge of wastewater flows above an allocated peak flow for each wastewater subbasin because conveyance and treatment capacity for wet weather flows may be adversely impacted by flows above this agreed limit.

c. Storm Drainage System

Collection System. The North Park Street Code area generally drains north toward and into the bay by surface flow and shallow arch culverts at street crossings. An underground system consisting of reinforced concrete pipes (RCP) ranging from 12 to 54 inches collects the flows and conveys them to the outfalls by either gravity or a pump.

Capacity and Condition. As a standard condition of approval, new development within the City of Alameda is required to replace or reconstruct existing storm drain systems and demonstrate that adequate capacity exists or can be provided either by expanding the capacity of lifts stations, diverting run-off to alternative outfalls, or by reducing the volume of run-off from the development through on-site measures.

d. Solid Waste

Waste Disposal and Diversion. The City of Alameda disposes of its waste at the Davis Street Transfer Station located in San Leandro and disposed at the Altamont Landfill located in unincorporated Alameda County**.** The City of Alameda has developed a Citywide integrated waste management plan, which requires preparation of a project-specific waste management plan as part of the demolition or building permit for redevelopment. According to data published by the California Integrated Waste Management Board, the City of Alameda achieved a diversion rate of diverted 48 percent in 1995, and 59 percent by 1998.[1] The current diversion rate indicates a City diversion rate of 65 percent. In order to increase the diversion rate and facilitate compliance with the California Integrated Waste Management Act and Measure D, the City Municipal Code requires all persons receiving solid waste collection to also have recyclable and organic materials collected.

e. Electricity

The North Park Street Code area electrical system is owned by the City of Alameda, and operated and maintained by Alameda Municipal Power (AMP). Usually, generated electricity is obtained from a geothermal power complex in which AMP maintains part ownership as one of 11 members of the Northern California Power Agency, a consortium of power providers. The City owned plant is located east of Main Street.

f. Natural Gas

Pacific Gas & Electric (PG&E) operates and maintains the natural gas distribution system in the North Park Street Code area. The primary uses of natural gas are steam generation, space heating, cooking, water heating, and some industrial operations. The gas distribution system consists of PG&E supply and PG&E lateral and service pipelines. The distribution system is composed of steel and polyethylene piping, with most of the steel pipelines cathodically protected.

g. Telecommunications

A wide range of telecommunications services within the North Park Street Code area are provided by numerous purveyors, who bill individuals and business subscribers for services provided.

2. IMPACTS AND MITIGATION MEASURES

a. Significance Criteria

Development that may occur under the North Park Street Code would significantly impact utility services if it would:

- Require the construction of new wastewater facilities, or expansion of existing facilities to serve the new development, the construction of which would cause significant environmental effects;
- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require water supply beyond the amount available to serve the project from existing entitlements and resources;
- Require the construction of new storm water drainage facilities, or expansion of existing facilities to serve the new development, the construction of which would cause significant environmental effects;
- Require development of new sources of energy or construction of new electrical generation or transmission facilities, the construction of which would cause significant environmental impacts;
- Require construction of new major telecommunications facilities, or expansion of existing facilities to serve the new development, the construction of which would cause significant environmental effects;
- Result in a increased demand for solid waste disposal services that would substantially decrease the remaining available space at a landfill; or
- Interfere with the accomplishment of waste diversion goals mandated by the California Integrated Waste Management Act.

b. Less-than-Significant Impacts

Water Supply. Buildout of the proposed North Park Street Code area would lead to an increased demand for potable water in the area, due to the intensification of land uses in the area. However, EBMUD has sufficient capacity to serve the area in normal rainfall years, especially since the area is not a new user of EBMUD water service and the growth projections are consistent with the General plan projections for the area. Should a drought occur, the area would experience the same deficiencies as other existing and new EBMUD customers.

Water supply problems that could be encountered by EBMUD customers in the area during a drought would be offset by adherence to existing General Plan policies that encourage the

implementation of water conservation measures and drought tolerant landscaping. These measures shall be consistent with City of Alameda Landscape Water Conservation Guidelines, State Law, and EBMUD water service regulations and obligations to efficiently manage its water supply as inferred under the Urban Water Management Planning Act and water rights agreements.

In addition to state and federally mandated water efficient plumbing standards, EBMUD encourages the use of water efficient appliances and other devices in and around homes and businesses to further water conservation practices. The proposed Project shall comply with the City of Alameda's Article IV related to water conservation landscaping. The minimum landscape standards to be followed are those described in Assembly Bill 325 – Statewide Model Water Efficient Landscape Ordinance. In addition, irrigated landscape plans shall encourage landscape budgets that do not exceed 80% of reference evapo-transpiration.

Storm Drainage. Redevelopment of the existing commercial, industrial or warehouse sites within the North Park Street Code area consistent with the Code and General Plan policies will generally result in a reduction of storm run-off rather than an increase in runoff. Existing NPDES permit requirements will ensure that the water quality impacts of the reduced runoff will be minimized to a less then significant impact. Finally, if the capacity of the existing pump station needs to be increased, this work would be subject to existing rules and permit requirements, which prevent environmental impacts.

Solid Waste. Solid waste generated by the buildout of the North Park Street Code area (from building demolition and generation of associated debris) could jeopardize Alameda's solid waste diversion goals. Many buildings contain large-scale roof timbers, roof decking, wall-framing timbers, wood or metal siding, interior wall partitions, and concrete slab floors, as well as other systems (e.g., plumbing, fire suppression). When such structures are "deconstructed," rather than demolished, wood and fixtures are retained for resale or other reuse rather than disposed, and the majority of such materials can be diverted from the waste stream. In some cases, warehouse deconstruction has resulted in a yield of up to 87 percent reusable materials. Both for-profit and non-profit entities (contractors and organizations) can divert deconstructed materials into existing recycling and reuse markets, or that can provide technical assistance to projects regarding the phasing and financing of alternative demolition procedures.

Section 21 of the City of Alameda Municipal Code requires the project proponents to submit plans for managing construction debris from specific projects in the North Park Street Code area to promote separation of waste types and recycling, and to provide for reuse of materials on-site for reconstructing infrastructure. These plans must be prepared in coordination with City staff, the specific Projects' sponsor(s), and demolition subcontractors, and shall be approved by City staff prior to issuance of a demolition permit. This existing regulation reduces this impact to a level of **less than significant**.

Electricity. AMP has forecasted annual electricity demand through fiscal year 2021 for the City and Alameda Point. Forecasts are revised annually to take into account the latest commercial and residential development plans. Citywide forecasts incorporate detailed analysis of electricity use by

commercial customers at Alameda Point, Harbor Bay Business Park, and Marina Village. The methodology for these forecasts is comprehensive, and annual electricity use over the past 2 years has been within 1 percent of AMP forecasts.

AMP does not anticipate any problems accommodating projected increases in electricity demand. Buildout of the North Park Street Code area would not require development of new sources of energy or construction of new electrical generation or transmission facilities, the construction of which would cause significant environmental impacts. The proposed North Park Street Code would not result in significant impacts related to electrical service.

Natural Gas. PG&E does not anticipate any problems accommodating projected increases in demand for natural gas. Buildout of the North Park Street Code area would not require development of new sources of energy or construction of new natural gas transmission facilities, the construction of which would cause significant environmental impacts. The proposed North Park Street Code would not result in significant impacts related to natural gas service.

Telecommunications. Buildout of the North Park Street Code area would not require the development of new major telecommunications facilities, or expansion of existing facilities to serve the new development, the construction of which would cause significant environmental effects. The proposed North Park Street Code would not result in significant impacts related to telecommunications services.

c. Significant Impacts

Impact UTIL-1: Use of existing substandard storm sewer or sanitary sewer transport facilities could contribute to peak wastewater or storm water flows that could exceed capacity of the existing sewage or storm drain transport and/or lift station facilities.

During wet weather events, and in times when groundwater is at its highest level (e.g., after a high rain winter season) ground water inflow and infiltration (I&I) to the sanitary sewer system through pipeline joints and cracks can be high. Reuse of existing on-site laterals and other components of the antiquated system that serve sites proposed in the North Park Street area would exacerbate existing conditions. Construction of a new laterals system to replace the existing storm drain and sewer systems would avoid significant impacts associated with the deteriorated condition of the existing laterals.

> **Mitigation UTIL-1:** Project sponsors for new construction projects or major renovations shall remove or reconstruct existing sewer and storm drain laterals that serve the site of the proposed development project to comply with City, EBMUD, and Regional Water Quality Control Board standards and to prevent infiltration/inflow to the maximum extent feasible. This measure would reduce the level of impact to less than significant.

Impact UTIL-2: Development proposals that exceed the General Plan development assumptions for the North Park Street plan area could cause an increase to peak wastewater

or storm water flows that could exceed capacity of the existing sewage or storm drain transport and/or lift station facilities.

Mitigation UTIL-2a: Prior to approval of a discretionary permit for a new construction or major renovations, City staff will confirm that the development proposal is consistent with the development projections for the area. If the proposed development exceeds the General Plan and Park Street development assumptions for the plan area, the project applicant shall be required to complete a wastewater and storm water capacity analysis to ensure that the development will not result in the need to upgrade or replace any off-site wastewater or storm water facilities. If the study indicates that off-site improvements are required, those improvements, or a fair share contribution to those facilities, shall be required of the project.

Mitigation UTIL-2b: Project sponsors for new construction projects or major renovations shall provide drought tolerant landscape materials consistent with the California Model Water Efficient Landscape Ordinance or Bay Friendly Landscape Guidelines to reduce water use and storm water runoff.